

**TRANSCRIPTION OF THE INTONATION OF NORTHEASTERN BRAZILIAN
PORTUGUESE**

by

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Meghan Dabkowski, M.A.

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Among dialects of Brazilian Portuguese (henceforth BP), the variety spoken in the Northeast region of Brazil is considered to display a distinctive use of intonation. In attempt to understand this characterization, this thesis presents an analysis of the intonational phonology of five main phrase types in Northeastern BP (henceforth NEBP): declarative statements, absolute questions, wh- questions, echo questions, and imperative statements. Contrastive focus, enumeration, and disjunction were also investigated. Participants were 5 female natives of the region currently residing in Pittsburgh, PA. Utterances were elicited using an intonation questionnaire designed to evoke everyday situations (Prieto and Roseano, 2010), which was adapted to BP by the author.

This descriptive analysis is couched within Autosegmental Metrical theory, which posits a separate level of linear organization for the pitch track of an utterance, autonomous from the text, or segmental information, but associated with it via tonal alignment with metrically strong syllables and phrase edges. Within this model, the Tone and Break Index (ToBI) system is used to transcribe intonational features. Given that there are no existing transcriptions of the intonation of NEBP within the ToBI system, this study aims to fill that gap by providing a description of various modal and pragmatic uses of intonation.

Findings that differentiate this dialect from European and southeastern Brazilian dialects include the consistent use of upstep in marking contrastive focus and two opposing variants for both yes-no questions, and wh-questions.

It is hoped that the present findings will add to the body of work on dialectal variation in intonation, and will contribute to our general understanding of intonational patterning across languages.

TABLE OF CONTENTS

Preface	xi
1.0 Introduction.....	1
1.1 Autosegmental Metrical Phonology and the ToBI system.....	2
1.2 Previous Research on Portuguese Intonation: European & Brazilian Varieties	4
2.0 Methodology	6
2.1 Participants.....	6
2.2 Materials.....	7
2.3 Procedures.....	10
3.0 Results.....	16
3.1 Declaratives.....	16
3.1.1 Broad focus	16
3.1.2 Contrastive focus	19
3.1.3 Enumeration statement.....	21
3.2 Yes-no questions	25
3.2.1 Neutral yes-no questions	25
3.2.2 Disjunctive absolute questions	27
3.3 Wh- Questions	29

3.3.1	Neutral wh-questions	29
3.4	Echo questions	32
3.4.1	Yes-no echo questions.....	32
3.4.2	Wh- echo questions	34
3.5	Imperatives	35
4.0	Discussion.....	38
4.1	NEBP Tones	38
4.2	Main nuclear and prenuclear accents.....	39
4.3	Distinct notational systems	40
4.4	Summary of intonational features of NEBP	41
4.5	Limitations of this study and areas for further research.....	43
5.0	Conclusion	45
APPENDIX A.....		47
APPENDIX B.....		61
BIBLIOGRAPHY		75

List of Tables

Table 1. Inventory of pitch accents and their graphic representation	12
Table 2. Inventory of boundary tones and their graphic representation	15
Table 3. A cross-dialectal comparison of nuclear configurations found for NEBP with those previously described for Standard European Portuguese, Northern European Portuguese, and other dialects of Southeastern Brazilian Portuguese (Rio de Janeiro and São Paulo).	37

List of Figures

Figure 1. Map of Brazil, with the Northeast region outlined, and participants' hometowns marked (Google Maps, 2012).	7
Figure 2. Sample ToBI annotation of sound file.....	11
Figure 3. F ₀ contour and textgrid of the broad focus statement <i>Maria está descascando uma laranja</i> 'Maria is peeling an orange' produced by a female speaker from Recife, Pernambuco, age 22.	18
Figure 4. F ₀ contour and textgrid of the contrastive focus statement <i>Eu não quero tangerinas não, quero limões</i> 'I don't want oranges, I want lemons' produced by a female speaker from Parnaíba, Piauí, age 28.	20
Figure 5. F ₀ contour and textgrid of the contradictory narrow focus statement <i>Não, eu sei que eles vão pro pro Rio</i> 'No, I know they're going to Rio' produced by a female speaker from Teresina, Piauí, age 25.	21
Figure 6. F ₀ contour and textgrid of the enumeration statement <i>Segunda-feira, terça-feira, quarta-feira, quinta-feira, sexta-feira, sabado e domingo</i> 'Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday' produced by a female speaker from Sobral, Ceará, age 28.	23

Figure 7. F ₀ contour of the beginning of enumeration statement <i>Domingo, segunda, terça</i> , ‘Sunday, Monday, Tuesday’ produced by a female speaker from Pernambuco, Recife, age 22.	24
Figure 8. F ₀ contour and textgrid of the YNQ <i>Tem doce de goiaba?</i> ‘Do you have guava jelly?’ produced by a female speaker from Solânea, Paraíba, age 31.....	26
Figure 9. F ₀ contour and textgrid of the YNQ <i>Tem doce de goiaba?</i> ‘Do you have guava jelly?’ produced by a female speaker from Recife, Pernambuco, age 22.....	27
Figure 10. F ₀ contour and textgrid of the absolute disjunctive question <i>Voces querem abacaxi or sorvete?</i> ‘Do you (plural) want pineapple or ice cream?’ produced by a female speaker from Teresina, Piauí, age 25.....	28
Figure 11. F ₀ contour and textgrid of the wh-question <i>Que horas são?</i> ‘What time is it?’ produced by a female speaker from Solânea, Paraíba, age 31.....	30
Figure 12. F ₀ contour and textgrid of the wh-question <i>Que horas são?</i> ‘What time is it?’ produced by a female speaker from Teresina, Piauí, age 25.	31
Figure 13. F ₀ contour and textgrid of the wh- echo question <i>Vocês me perguntaram aonde que eu vou?</i> ‘Did you (plural) ask me where I’m going?’ produced by a female speaker from Sobral, Ceará, age 28.....	35
Figure 14. F ₀ contour and textgrid of the imperative command statement <i>Maria, volta aqui!</i> ‘Maria, come here!’ produced by a female speaker from Parnaíba, Piauí, age 28.	36

Preface

The work reported here was supported with a grant from the Department of Linguistics at the University of Pittsburgh. I am grateful to my adviser, Marta Ortega-Llebaria, as well as committee members Shelome Gooden and Alan Juffs, all of the Department of Linguistics at the University of Pittsburgh, for their useful comments and discussion. Additionally, I would like to thank Ana Paula Carvalho of the Department of Hispanic Languages and Literatures at the University of Pittsburgh, for her assistance with translation, piloting, and recording of questionnaire contexts. Finally, I would like to express my gratitude to my participants for volunteering their time and their voices.

1.0 Introduction

NEBP, a dialect that is spoken in the states of Maranhão, Piauí, Ceará, Rio Grande do Norte, Paraíba, Pernambuco, Alagoas, Sergipe and Bahia, is popularly considered to display a distinctive use of intonation. The goal of this research is to describe the intonational phonology of NEBP by focusing on the distribution of pitch accents and boundary tones in different phrase modalities and pragmatic situations in order to understand the connection between communicative function and acoustic structure. This paper presents the first step in a comprehensive descriptive analysis of the intonational system of NEBP.

The northeast region of Brazil was one of the first areas of Brazil to be settled by Europeans in the 16th and 17th centuries and is currently the most heavily populated underdeveloped area of country (Mitchell 1981). The ethnic makeup of the area is approximately 60% European, 30% African, and 10% Native American. It is likely that there was a larger African influence on this dialect than other Brazilian dialects because approximately half of the slaves brought to Brazil by the slave trade were brought to the Northeast due to the sugarcane and cotton agricultural industries. Africans brought to Brazil originated from two main areas of the African continent: the Bight of Benin and west-central Africa (Eltis & Halbert, 2009) and many spoke Yoruba or Kimbundu. Additionally, while most are extinct or currently have no known speakers, there was at one time a variety of indigenous languages spoken in the area, most of these from either the Macro-Gê or Tupi-Guaraní language families (Lewis, 2009). Current residents of the Northeast

generally are considered to be fairly limited in terms of social and economic mobility, and the region sends out a large number of workers that migrate to the more economically stable areas in the southeast for work. All of these factors have brought about language and dialect contact that may have contributed to the nature of the intonation of NEBP.

1.1 Autosegmental Metrical Phonology and the ToBI system

Intonation is an important aspect of a language's prosody, along with rhythm and stress. It is the tune of an utterance, comprised of a series of pitch targets and their alignment with stressed syllables. Intonation has been shown have a phonological organization (Pierrehumbert 1980) and carries important information for the interpretation of an utterance. The presence of a rise or fall in F0, its height relative to the rest of the contour, and its alignment can all have important consequences for the meaning being conveyed. Intonation alone can mean the difference between a question and a statement, or can signal whether the information being presented is new or given, or whether it contrasts with some other previously stated or implicitly understood information. Because of the variation possible in intonational patterns, and the importance of intonation for the correct interpretation of an utterance, intonational dialect differences tend to be quite salient, and therefore, are easily noticed and commented on by non-linguists.

The analytical framework followed in this analysis is the Autosegmental Metrical (AM) model of intonation. According to AM theory, the pitch track of an utterance is contained on a separate linear tier that operates independently of the segmental track, but the two are aligned based on metrically strong syllables, and phrase boundaries (Pierrehumbert, 1980; Ladd, 1996, 2008). In this model, the pitch track is assumed to consist of a series of high and low targets

associated with either prominent syllables or edges, and in between these targets, pitch is thought to be phonologically underspecified, and simply a result of interpolation (Ladd, 1996, 2008).

AM theory draws a distinction between “the two sorts of tonal units, namely, tonal entities associated with prominent or metrically strong syllables (or *pitch accents*) and tonal entities associated with edges of prosodic domains (or *boundary tones*)” (Prieto & Roseano, 2010, p.2). The combination of pitch accent and boundary tones at the right phrase edge is known as the prosodic nucleus, and nuclear configurations are considered to be crucial for correct interpretation of modality (Moraes & Colamarco, 2007).

The Tone and Break Indices (ToBI) transcription system within the AM model was originally proposed as a system for describing American English (Beckman, 1986), and subsequently adapted for many other languages and dialects (Grice & Benzmüller, 1995 for German; Jun, 1996 for Korean, Prieto, in press, for Catalan; Sosa, 1999 and Estebas-Vilaplana & Prieto, 2008 for Spanish; Venditti 1997 for Japanese; among many others: cf. The Ohio State University Department of Linguistics, 1999). A ToBI transcription represents the text, or segmental information, pitch accents, boundary tones, and the strength of perceived juncture between words.

It is in the distinction between the types of tonal targets and in the focus on the association and alignment of tonal events with syllables that differentiates the ToBI system from other such theory-neutral systems such as INTSINT (International Transcription System for Intonation) (Hirst & DiCristo, 1998). Given the widespread agreement on the validity of AM theory and the reliability and learnability of the ToBI system (Silverman, et al., 1992) as well as successful adaptations of it for many typologically distinct languages, it was chosen as the framework for this research.

1.2 Previous Research on Portuguese Intonation: European & Brazilian Varieties

One of the aims of the current study is to compare and contrast patterns found in NEBP with those found for other varieties of Portuguese, both European and Brazilian, as well as other Romance languages, especially Spanish.

Early work on Portuguese within the AM model focused on the European variety, specifically the dialect spoken in Lisbon (Frota, 2002; Frota & Vigário, 2000; Vigário & Frota, 2003). Comparative works are more recent, and have analyzed patterns in this dialect in contrast with patterns found in the dialect spoken in Braga, located in northwestern Portugal (Vigário & Frota, 2003), and with BP (Viana & Frota, 2007).

Several descriptive and comparative works also focus on BP, but typically only the dialect spoken in the southeast region of Brazil, which includes São Paulo and Rio de Janeiro. One of the major aspects of intonation that differentiates Brazilian Portuguese from European Portuguese is that BP can optionally carry a pitch accent on every prosodic word (ω), whereas EP typically carries pitch accents only on the first and last (nuclear) ω s. (Fernandes, 2007; Frota & Vigário 2000; Viana & Frota 2007). This is an important feature differentiating the two major regional dialects of Portuguese, and could contribute to the perception of Brazilian dialects as more song-like. However, the informative status of prenuclear accents and their role in modal interpretation for BP is not entirely clear. It has been shown for EP (Fale & Faria, 2005), as well as for French and English (Grosjean & Hirt 1996) among other languages, that listeners use prenuclear information in processing and interpreting phrase modalities, and are able to

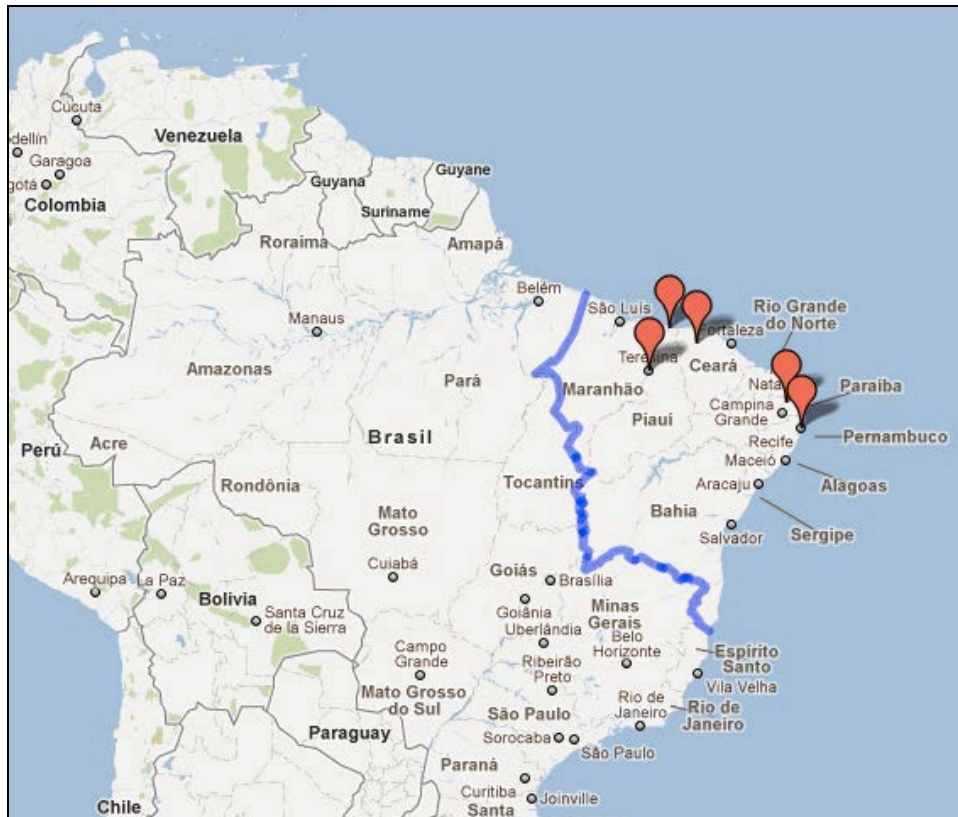
accurately determine the correct modality without hearing the nuclear configuration. However, it is also important to note that at least one BP perception experiment involving manipulation of pitch in both prenuclear and nuclear segments of the contour, found that the nuclear contour, specifically the combination of final pitch accent and boundary tone, is what carries the relevant information for correct interpretation of phrase modality (Moraes & Colamarco, 2007). Given that this differs from other Romance languages, more perceptual studies research are needed on prenuclear contours in BP.

2.0 Methodology

2.1 Participants

Participants were 5 Brazilian nationals from the Northeast region of the country, currently living in Pittsburgh, Pennsylvania. All participants were female, and their ages ranged from 22 to 31, with an average age of 27. None reported having any hearing or speech problems. For all, Brazilian Portuguese was their first language, and the language used by their parents in the home. Because of the location of the research study, all speakers additionally spoke English as a second language, and a few reported having had some instruction in Spanish as well. All had lived in their respective hometowns in the states of Piauí, Ceará, Paraíba, and Pernambuco in Northeastern Brazil until at least the age of eighteen. These can be seen on the map in Figure 1.

Figure 1. Map of Brazil, with the Northeast region outlined, and participants' hometowns marked (Google Maps, 2012).



2.2 Materials

The primary research instrument is a questionnaire designed to elicit various phrase types with distinct pragmatic meanings. It was adapted from Prieto and Roseano (2010), both translated into Brazilian Portuguese as well as changed to ensure that contexts were culturally appropriate. Prior to beginning the study, the questionnaire was further modified based on a pilot study

designed to ensure that participants would be able to easily understand the questions and respond appropriately to the contexts presented. The questionnaire consists of 71 questions encompassing 6 main phrase types:

1. Declarative statement: utterances that give information and can answer the question
What happened?
2. Absolute questions: questions that can either be answered with *yes* or *no*, or those that present a choice between two or more options
3. Pronominal or wh-questions: information-seeking questions that ask *who*, *what*, *when*, *where*, *how*, and *why*
4. Echo questions: questions repeated to ensure understanding or for some other pragmatic purpose
5. Imperatives: statements commanding an interlocutor to take some action
6. Vocatives: calls, frequently consisting only of a proper name

Within each phrase type, several types of utterances are elicited, which can be split into neutral/broad focus vs. contrastive focus, as seen in examples 1 and 2. Within these categories, there are further divisions, which highlight different information structure or pragmatic distinctions.

The questions are based on everyday situations and are designed to elicit realistic, spontaneous utterances in response to the contexts presented. Because it would be time-consuming and impractical to obtain these same contexts in natural speech, this is a very useful and valuable instrument: it is able to elicit *guided spontaneous*, and therefore naturalistic, speech. Versions of the same instrument were used successfully by several authors in providing the

contexts for elicitation of utterances used in describing the intonation of various Spanish dialects (Prieto & Roseano 2010). Examples of the contexts are given in (1) and (2) below.

(1) Contrastive focus statement:

Você vai ao mercado para comprar frutas e a vendedora é um pouco surda. Ela não ouviu bem e depois de dizer que você queria um quilo de limões, ela pergunta para você se você quer tangerinas. Diga que não, que você quer limões.

-Não, quero **limões**.

You go to the market to buy fruit, but the seller is a little bit deaf. She didn't hear you well, and after saying that you wanted a kilo of lemons, she asks if you want tangerines. Tell her no, that you want lemons.

*-No, I want **lemons**.*

(2) Broad focus disjunctive absolute question:

Para a sobremesa você tem abacaxi e sorvete. Pergunte aos convidados se querem abacaxi ou sorvete.

-Vocês querem abacaxi, ou sorvete?

For dessert, you have pineapple or ice cream. Ask your guests if they would like pineapple or ice cream.

-Do you want pineapple, or ice cream?

Although all of the above-described phrase types were collected in sessions with participants, the only ones analyzed here were: broad focus statements, narrow/contrastive focus statements, neutral yes-no questions, yes-no questions with disjunction, echo yes-no questions, neutral wh-questions, and echo wh-questions, and imperative command statements. Others will be analyzed in follow-up studies.

2.3 Procedures

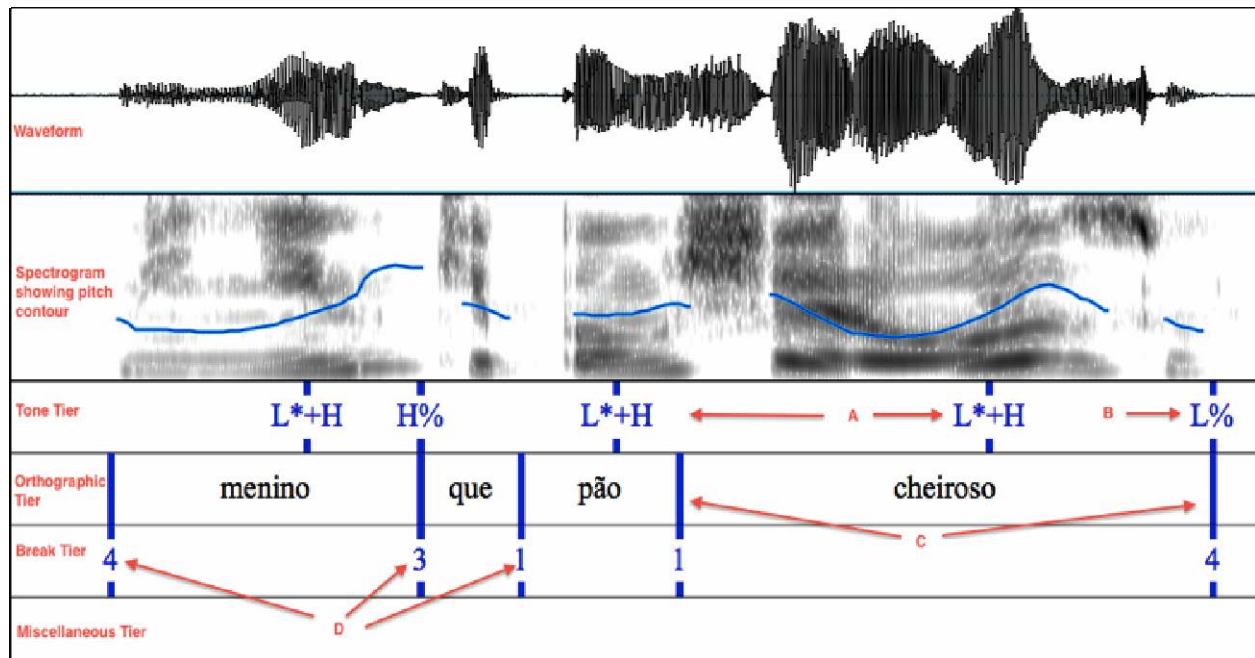
A native Northeastern Brazilian Portuguese speaker recorded the questions in advance, and the researcher played the recording for participants in order to create an environment in which they would produce their most natural and native-like speech. The researcher ensured that the context was understood for each question prior to recording the response. Each response was recorded a minimum of two times for each participant in order to ensure good quality recordings with appropriate responses.

The study procedures were recorded in a sound-attenuated studio located in the Robert Henderson Language Media Center at the University of Pittsburgh, using the built-in microphone on a MacBook and Audacity 1.2.5 (Audacity Team, 2011).

Participants' responses were analyzed and transcribed in Praat (Boersma & Weenink, 2011). For each utterance, stressed syllables and phrase boundaries were determined, and the pitch contour was analyzed and annotated in relation to the segmental information. A ToBI transcription contains four parallel tiers of labels: an orthographic tier, representing the segmental information of the utterance; a tone tier, representing the tonal events – both pitch accents and boundary tones; a break tier, representing the prosodic grouping of words in an

utterance, and the miscellaneous tier, used to represent any other event that may effect the utterance (e.g. coughing, or laughter). In order to understand the labeling scheme, a sample phrase is provided in Figure 2, showing the waveform, spectrogram and pitch contour for the sound, as well as their four labeled tiers.

Figure 2. Sample ToBI annotation of sound file



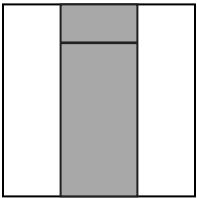
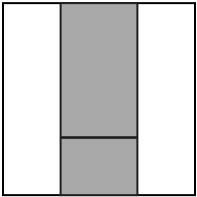
On their first tier, the tone tier, pitch accents and boundary tones were labeled using ToBI conventions to indicate their contour shape (rising or falling), height (high, low, mid, upstepped or downstepped), and alignment (indicated with asterisk placement for pitch accents) with stressed syllables. Boundary tones are marked with the notation “%” to distinguish them from pitch accents. In Figure 2, label (A) points to two labeled pitch accents in which the mark was placed near the center of the stressed syllable for each word, while (B) shows a mark placed at the phrase end for the boundary tone. The second tier, the orthographic tier, shows the text of the utterance, marked in intervals that correspond with word boundaries, as label (C) shows. On the

third tier, breaks between words were labeled according to their perceived strength, on a scale from 0 to 4, 4 being the strongest perceived break, corresponding to a phrase's beginning or end, and 0 corresponding to a perceived lack of break between words. Label (D) shows the most commonly used break indices: 4, 3, and 1. The last tier is the miscellaneous tier, and contains no annotations.¹

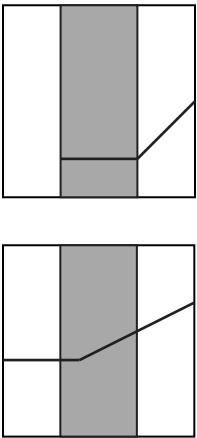
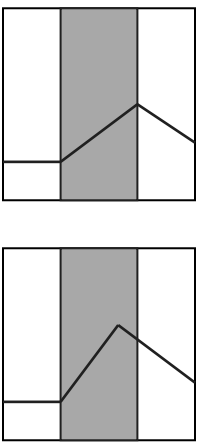
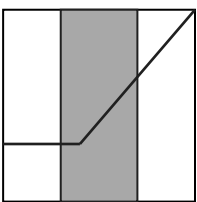
The criteria used for labeling utterances in accordance with ToBI conventions require explanation. Table 1 below contains a description of each pitch accent used in labeling contours, and shows a prototypical appearance of each label. Table 2 does the same for boundary tones.

Table 1. Inventory of pitch accents and their graphic representation

Monotonal Pitch Accents

	H*	A high, level tone aligned within the tonic syllable, without a preceding F0 valley, is labeled H*. In this corpus, this accent is infrequent but occasionally found on phrase-initial prenuclear syllables in wh-questions.
	L*	A low, level tone, phonetically realized near the low end of a speaker's pitch range and aligned within the tonic syllable is labeled L*. In this corpus, this accent was found infrequently, used occasionally in nuclear position in broad focus declarative statements, and wh-questions.

¹ Since the data collected for this research was laboratory speech, and none of the utterances analyzed contained such disfluencies, the miscellaneous tier was omitted from all figures here, except for the sample representation in Figure 2.

	<p>L^*+H</p>	<p>L^*+H represents a low target tone that begins to rise in at the end of the tonic syllable, rising to a peak in or after the post-tonic. This accent was quite frequent in the current data, appearing in phrase-initial prenuclear position in broad and narrow/contrastive focus declaratives, neutral YNQs, neutral WHQs. It was also found in phrase-medial prenuclear position the same types of phrases. It was used in nuclear position for both YNQs and WHQs.</p>
	<p>$L+H^*$</p>	<p>$L+H^*$ represents a rising tone, preceded by a low target, with the high peak aligned at or near the syllable boundary. Like L^*+H, this accent was quite frequently identified, appearing in phrase-initial prenuclear position in broad and narrow/contrastive focus declaratives, neutral YNQs, neutral WHQs. It also was found in phrase-medial prenuclear position in the phrase types mentioned above. In nuclear position, it marked questions or signaled contrastive focus.</p>
	<p>$L+¡H$</p>	<p>$L+¡H$ represents a high rise from a low target. In this corpus, it is used in nuclear position to convey focus in declaratives, or to express surprise.</p>

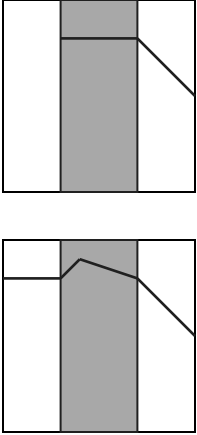
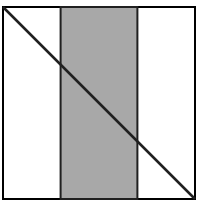
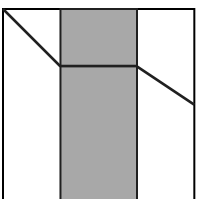
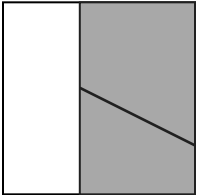
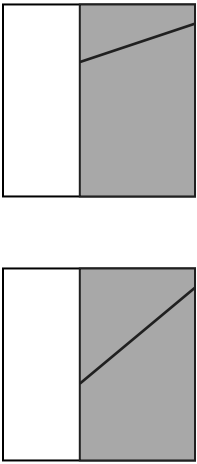
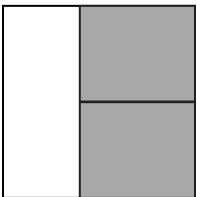
	H*+L	H*+L represents a falling tone, either a level high throughout the tonic, falling to a low immediately at the post-tonic, or reaching an early peak, falling to a mid or high, or plateauing, and then falling sharply on the post-tonic. It occurs rather infrequently in this corpus, appearing in nuclear position in some imperative statements, and in prenuclear position in one of two YNQ patterns.
	H+L*	H+L* represents a tone that falls throughout the tonic syllable, and reaches a valley at or near the syllable boundary.
	H+!H*	H+!H* represents a general falling contour that levels out in the tonic syllable and then continues to fall in the post-tonic. It is primarily found on non-phrase-initial prenuclear syllables in broad focus statements.

Table 2. Inventory of boundary tones and their graphic representation

Monotonal Boundary Tones²

	L%	L% denotes a boundary tone that falls from the tonic syllable into the low end of the speaker's range. In this corpus, L% was used in broad and contrastive/narrow focus statements, one variant of each YNQs and WHQs.
	H%	H% indicates a tonal rise following the tonic syllable. The two representations below show the varying degree of rise. This boundary tone was found in one variant each of YNQs and WHQs, echo questions, and enumeration statements.
	!H%	A fall to an intermediate plateau from a tonic high in the utterance final syllable, or a sustained mid-level pitch is labeled ¡H% in this corpus. It was found in some enumeration statements, and is thought of as equivalent to the M% described for Spanish (Estebas-Vilaplana & Prieto, 2008; Prieto & Roseano 2010).

² Bitonal boundary tones are not included because the monotonal tones capture the necessary phonological distinctions, and for BP, a final rise or fall is considered to be falling to a level low target, or rising to a high target.

3.0 Results

3.1 Declaratives

In the literature on BP, a broad focus declarative nuclear contour is said to contain a falling terminal pitch (Azevedo 2005; Madureira, 1994), with the peak appearing on or near (alignment unspecified) the stressed syllable of the content word in nuclear position (Madureira, 1994). The nuclear contour has been described as H+L* L%. An L*+H tone is said to be the main prenuclear accent in a BP declarative statement, and when used in nuclear position, conveys narrow focus (Viana & Frota, 2007). Both broad focus and narrow focus declarative statements of varying types were analyzed in this study.

3.1.1 Broad focus

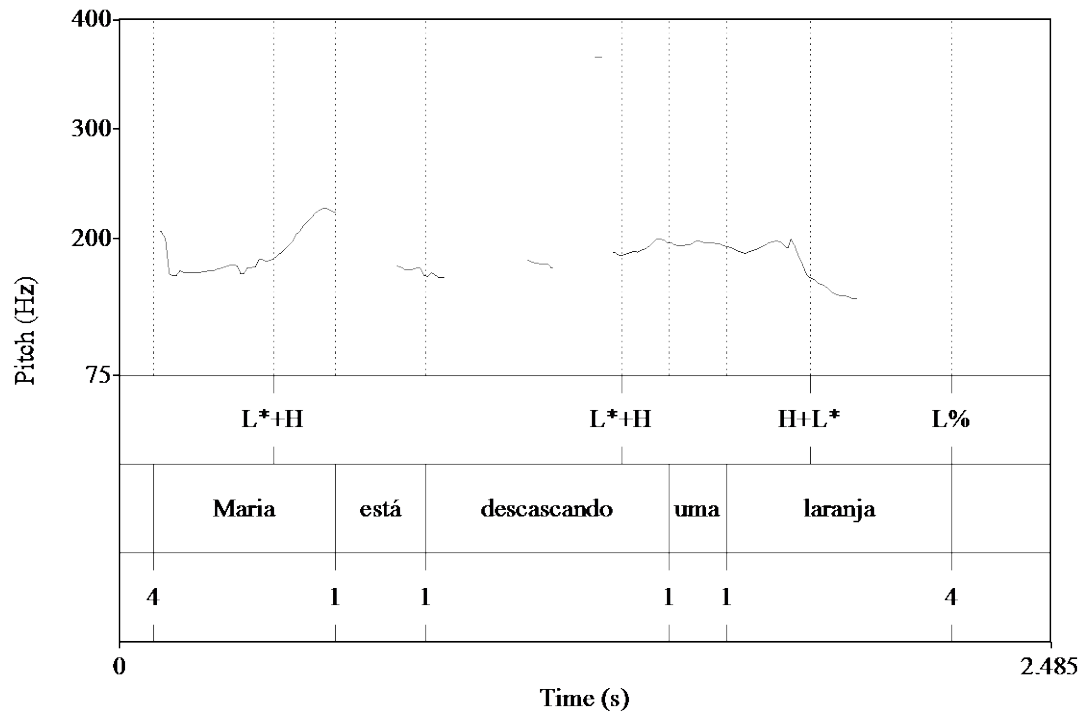
A broad focus declarative statement is a general affirmation that could answer “Tell me something about the world”. The statements studied here were elicited with broad focus by showing pictures and drawings to participants and asking them to describe what they saw.

This type of statement has been described in several languages as showing a general downdrift, or descending pattern. Among these are Mainstream American English (Pierrehumbert, 1980), Spanish (Sosa, 1999; Prieto & Roseano 2010), European Portuguese

(Frota & Vigário, 2000; Frota, 2002; Vigário & Frota, 2003) and southeastern varieties of BP (Fernandes, 2007), as well as many others.

In the broad focus declarative statements analyzed here, the general shape was, as expected, a descending contour, representing the downdrift mentioned above. Statement-initial prenuclear pitch accents were typically the rising contour L^*+H , with the F_0 peak aligning on the post-tonic syllable. The nuclear syllable in a broad focus declarative statement was always the falling contour $H+L^*$, with the L target reached in the tonic syllable, and maintained until phrase end. This consistent maintenance of the low tone in the post tonic syllable suggests that the phrase end is marked by a low boundary tone $L\%$. Figure 3 shows this pattern realized for a broad focus declarative statement.

Figure 3. F₀ contour and textgrid of the broad focus statement *Maria está descascando uma laranja* ‘Maria is peeling an orange’ produced by a female speaker from Recife, Pernambuco, age 22.

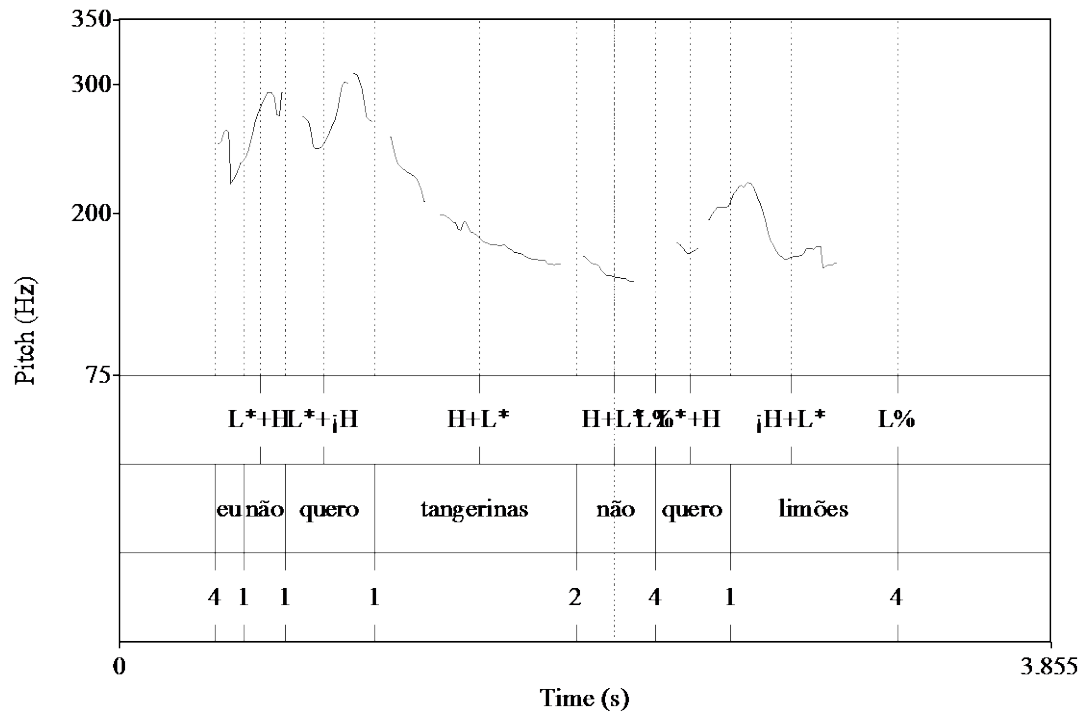


As mentioned above, BP allows optional pitch accents in non-initial prenuclear position. In the data examined for this study, it was found that these optional intervening pitch accents were most frequently realized with the dynamic rising tone L*+H contour typical of phrase-initial prenuclear accents, however, other pitch accents were occasionally used as well without the perception of a change in focus or modality. The most common of these was the similar pitch accent, L+H*, which differs only in peak alignment. For Moraes (2008), although L*+H and L+H* are phonetically distinct in terms of peak alignment, in prenuclear position they function essentially as allophones. A few prenuclear contours were characterized by pitch accents that could be characterized as H*+L, but many showed a downstepping pattern, using the H*+!H pitch accent.

3.1.2 Contrastive focus

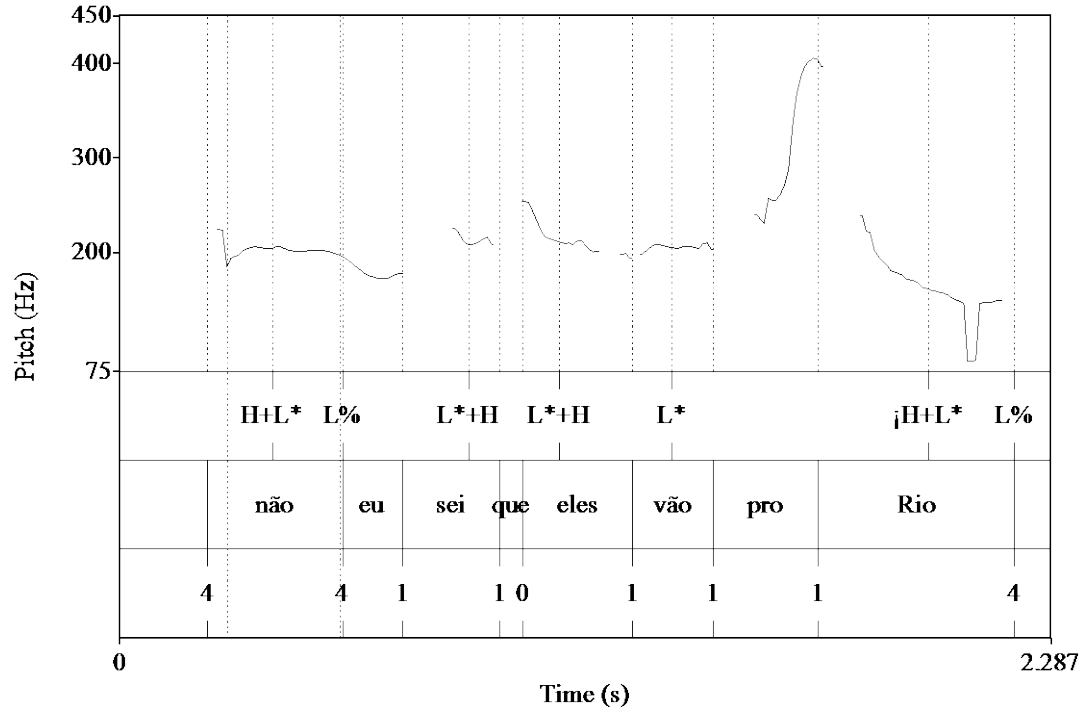
Contrastive focus in declarative statements was manifested differently depending on the placement of the focused word within the phrase, as shown in Figure 4. Where focus appeared on a word in prenuclear position, the contour showed a low tone aligned within the stressed syllable, followed by an upstepped high tone reaching a peak on the post-tonic syllable, transcribed as $L^*+\text{H}$. Where focus was in nuclear position, however, the prenuclear contour showed very little pitch movement until a rise in the pretonic nuclear syllable, followed by a low target in the tonic syllable, represented as $\text{H}+L^*$. It is important to note that the local F_0 peak for the focused word is aligned with the pretonic syllable, and is also in some cases the highest F_0 value in the entire phrase (which also contributes to the reasoning behind classifying the normal focus contour as an upstepped, rather than a regular H.) Both of these focus patterns can be seen in Figure 4, on *quero* in prenuclear position, and on *limões* in nuclear position.

Figure 4. F_0 contour and textgrid of the contrastive focus statement *Eu não quero tangerinas não, quero limões* ‘I don’t want oranges, I want lemons’ produced by a female speaker from Parnaíba, Piauí, age 28.



Given that in BP all prosodic words (ω) can carry pitch accents, in a categorical, contradictory phrase, all ω s carry a similar pitch accent as the focused word being explicitly contradicted, as seen in Figure 5. All prenuclear syllables carry a L*+H pitch accent, save for the immediately prenuclear *vão*, throughout which a low plateau is maintained, serving as a redundant cue to further contrast with the upstepped high in the nuclear pitch accent.

Figure 5. F₀ contour and textgrid of the contradictory narrow focus statement *Não, eu sei que eles vão pro pro Rio* ‘No, I know they’re going to Rio’ produced by a female speaker from Teresina, Piauí, age 25.



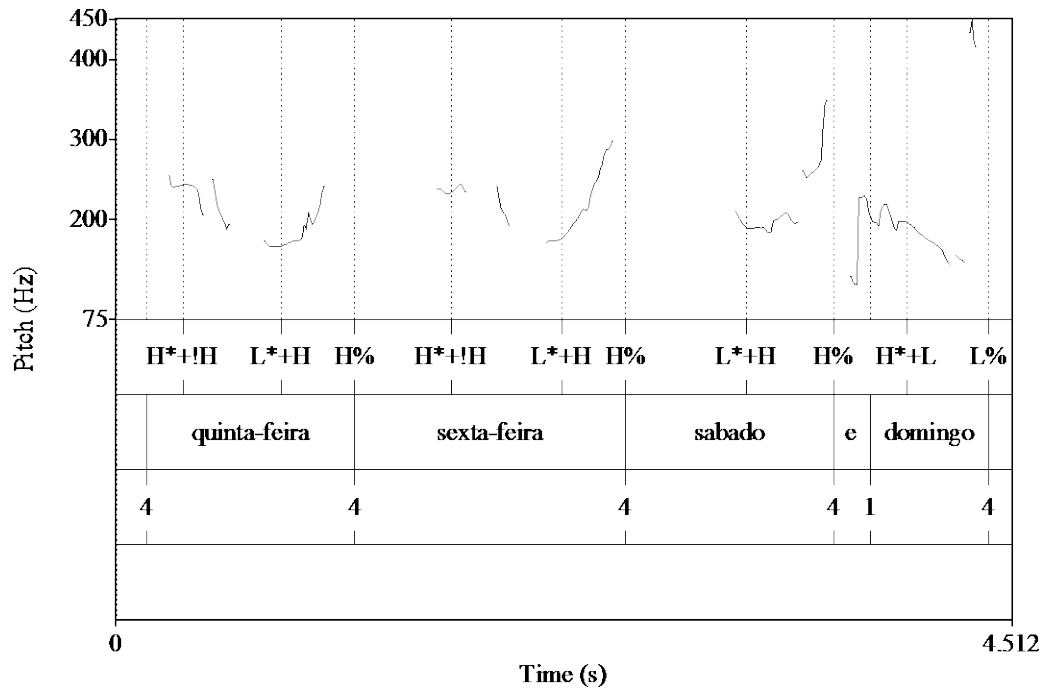
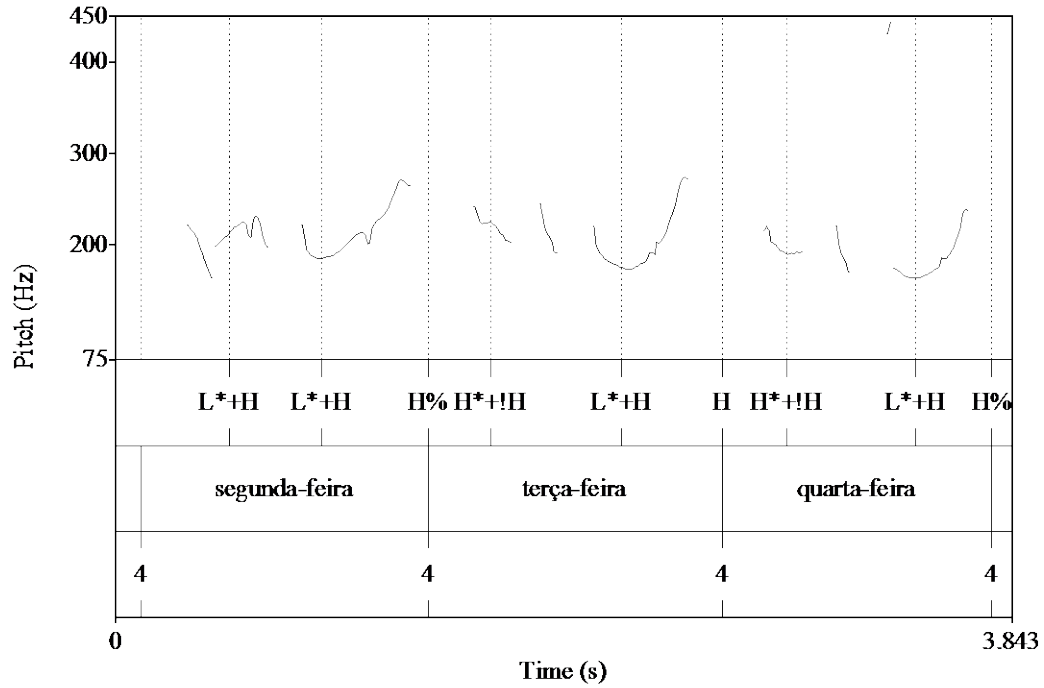
3.1.3 Enumeration statement

Enumerations also showed 2 distinct patterns in NEBP: both a hat-shaped pattern on each tonal unit, or a fall-rise pattern on non-final intermediate phrases, and a hat shape in nuclear position for the IP, was observed. These patterns correspond to those that have been described for several other Romance languages (Frota et al. 2007) as either *sustained pitch*, or *continuation rise*, respectively.

The enumeration phrase elicited here was a listing of the days of the week, thus ensuring the same number of list items for all speakers. In both patterns, as illustrated in Figures 6 and 7, the IP-initial phrase began with a rising L*+H. In the pattern showing the continuation rise,

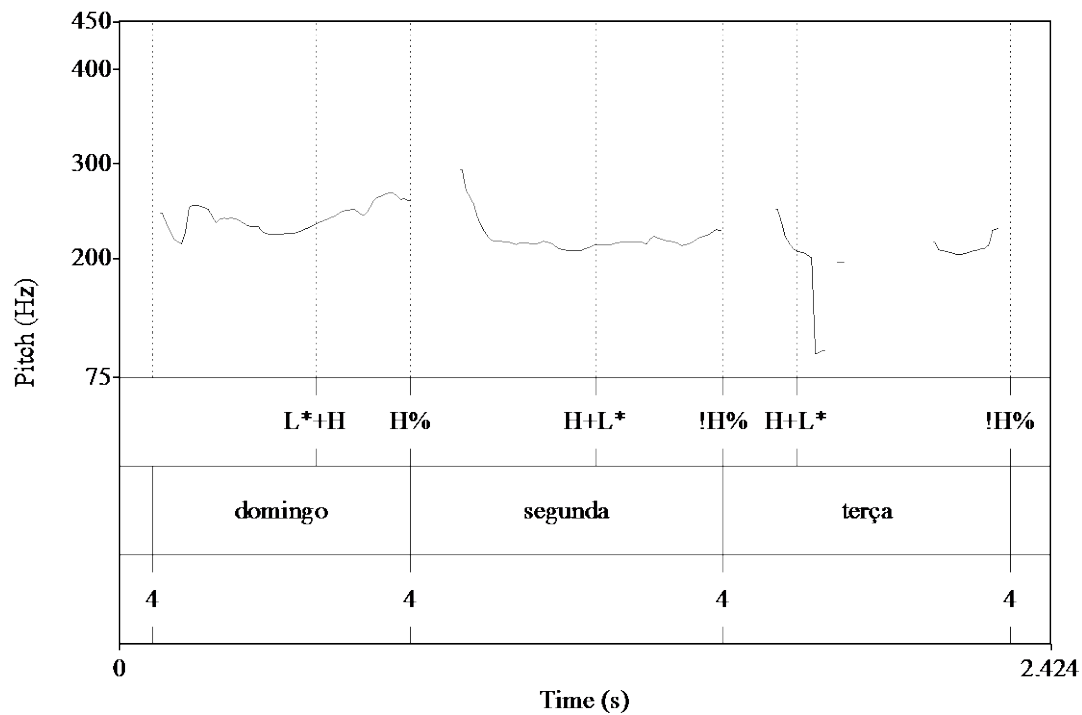
subsequent internal phrases showed a fall to a plateau in the prenuclear tonic syllable, followed by a very small degree of rise, then fall in the post-tonic syllable, which was analyzed here as $H^*+!H$. In nuclear position, these phrases consistently showed a low tone reached in the tonic syllable, followed by a relatively sharp rise, analyzed as a combination of the pitch accent L^*+H and boundary tone $H\%$. The first portion of this enumeration, showing the pitch accents for the IP initial phrase, and two intermediate phrases is shown in the top panel of Figure 6. The second portion in the bottom panel shows the intermediate pitch accent pattern, as well as IP final nuclear pattern.

Figure 6. F_0 contour and textgrid of the enumeration statement *Segunda-feira, terça-feira, quarta-feira, quinta-feira, sexta-feira, sabado e domingo* ‘Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday’ produced by a female speaker from Sobral, Ceará, age 28.



In the pattern showing sustained pitch, a more level contour was maintained. Here, the nuclear configuration in internal phrases can be identified as H+L* !H%, in which there is a fall into the tonic syllable and then a very slight rise coming out of it to the boundary. This pattern can be seen in *segunda* and *terça* in Figure 7 below. After the IP-initial L*+H, the boundary tone is analyzed as H%, since there is a significant rise to the boundary, as opposed to the less substantial rises marked as !H%.

Figure 7. F₀ contour of the beginning of enumeration statement *Domingo, segunda, terça*, ‘Sunday, Monday, Tuesday’ produced by a female speaker from Pernambuco, Recife, age 22.



3.2 Yes-no questions

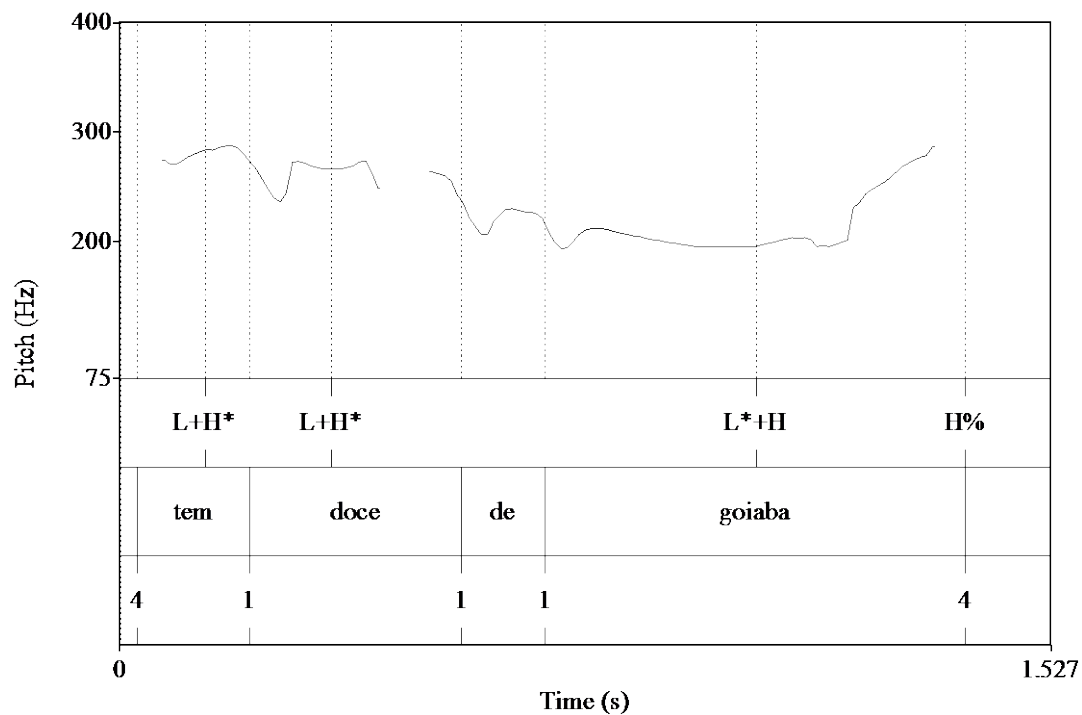
Yes-no questions (henceforth YNQs) in Portuguese are mainly signaled by intonation alone (Moraes, 1998). They are described as having an overall rising pitch (Azevedo, 2005; Madureira, 1994; Moraes, 1998, Moraes and Colamarco 2007), beginning slightly higher than a declarative, and also possessing a pretonic syllable with lower pitch than in a declarative, which is thought to be a redundant feature used to create even greater contrast with the nuclear configuration (Moraes, 1998). Moraes also makes brief mention of dialectal differences, noting that the typical Brazilian pattern is the exact opposite of the European pattern, but that in NEBP, the YNQ pattern is “closer to the European pattern” (1998, p.194).

3.2.1 Neutral yes-no questions

Both patterns described above were found in this corpus for the intonation of broad focus YNQs. Neither was more frequently employed than the other in the current data, and some speakers produced both contours in slightly different contexts. Therefore the variation does not appear to be related to regional dialect variation within Brazil’s Northeast. Because it seems unlikely that such dissimilar patterns would be allophones, further research will be necessary to determine if there might be a slight pragmatic distinction between the two patterns, perhaps related to the expected answer to the question.

The first pattern observed is similar to existing accounts in the literature of YNQs in Standard EP and southeastern dialects of BP. The curve begins at a mid to high level, with either a high H^* or a rising tone L^*+H on phrase-initial prenuclear syllable and then falls until the nuclear syllable, which is either a low L^* or a rising L^*+H tone, and the phrase ends with a high boundary tone $H\%$. An example of this pattern can be seen in Figure 8.

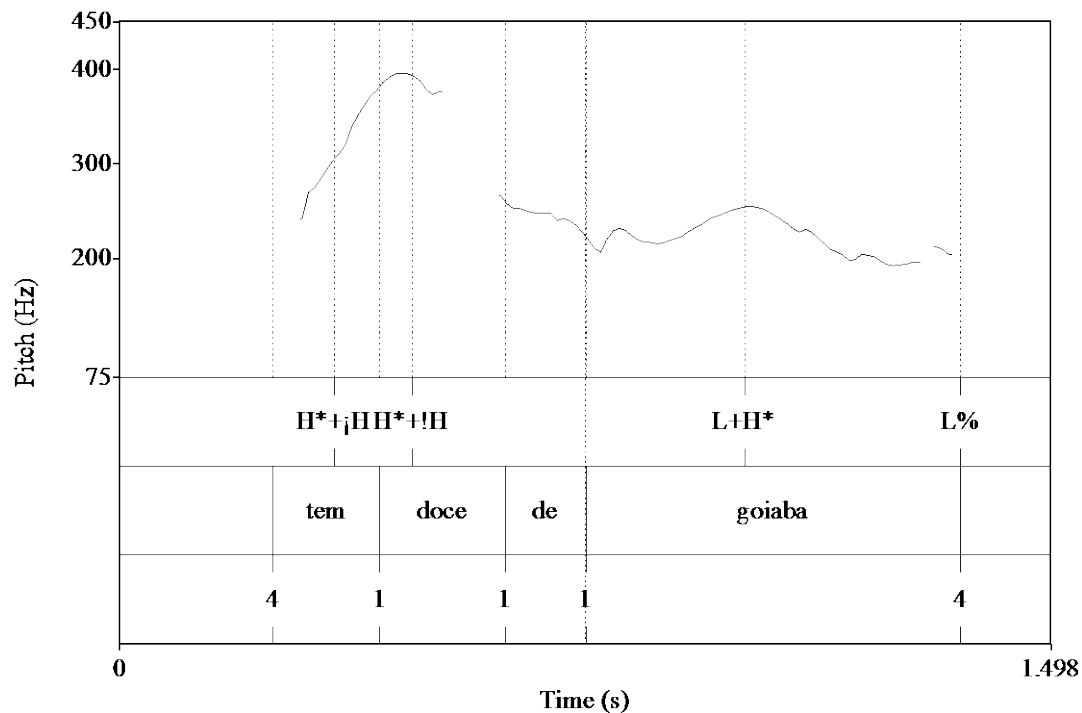
Figure 8. F_0 contour and textgrid of the YNQ *Tem doce de goiaba?* ‘Do you have guava jelly?’ produced by a female speaker from Solânea, Paraíba, age 31.



The second pattern observed is similar to one of the two variant patterns attested for Northern EP (Vigário & Frota, 2003). It is characterized by a very high or high rising beginning, with phrase-initial pitch accent that was analyzed as H^*+H and a rising tone $L+H^*$ in the nuclear

syllable, followed by a fall to a final low boundary tone L%. Figure 9 shows this distinct pattern with the same segmental information as the utterance in Figure 8.

Figure 9. F₀ contour and textgrid of the YNQ *Tem doce de goiaba?* ‘Do you have guava jelly?’ produced by a female speaker from Recife, Pernambuco, age 22.

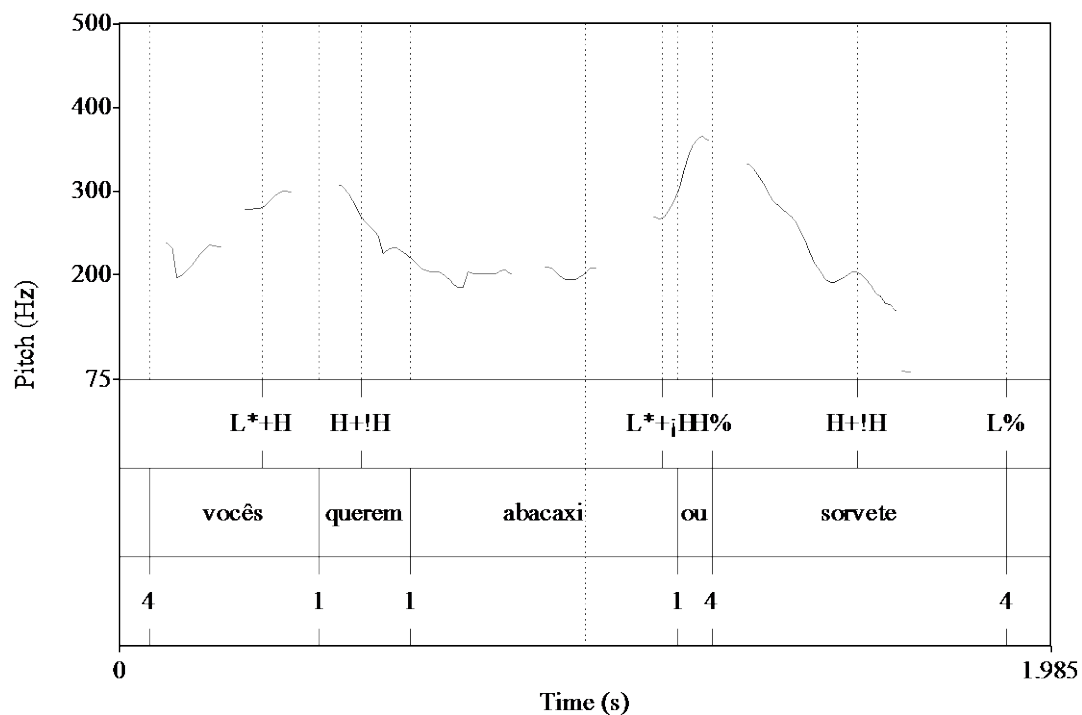


3.2.2 Disjunctive absolute questions

In an absolute question with disjunction, there is typically a pause after the first item is presented, and a resetting of pitch after the juncture. The questions analyzed here were of the type in which the speaker presents two or more choices for their interlocutor to choose between, resulting in a type of enumerative intonation. In this corpus, questions of this type showed the

rising YNQ pattern, typically with a very high rise after the first part of the question, analyzed as a combination of the high rising pitch accent L^*+H and a high boundary tone $H\%$. When more than two choices were given, the pattern was similar to that used for enumeration in statements: a final rise was employed at the end of each item constituting an intermediate phrase, and the item in final position showed a fall to a final low boundary tone, signaling the end of the list. An example of a question with two choices is seen in Figure 10 below.

Figure 10. F_0 contour and textgrid of the absolute disjunctive question *Voces querem abacaxi or sorvete?* ‘Do you (plural) want pineapple or ice cream?’ produced by a female speaker from Teresina, Piauí, age 25.



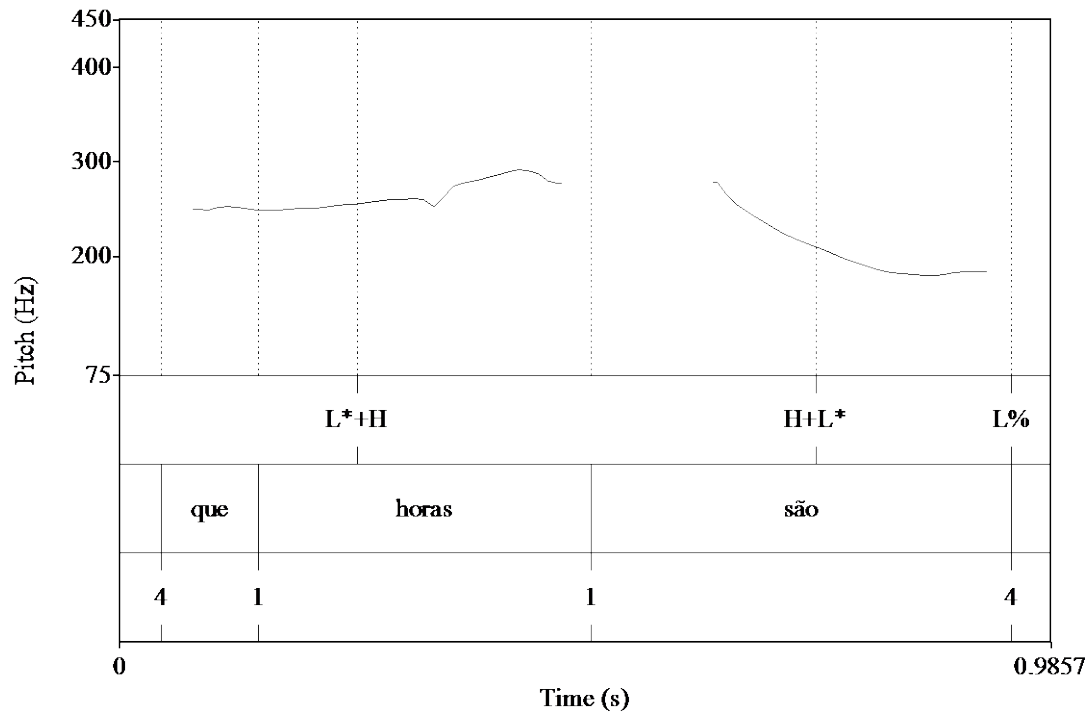
3.3 Wh- Questions

Previous descriptions of the intonation of wh-questions characterize them as having a globally falling pitch (Azevedo, 2005; Madureira, 1994), although a final rise may be employed to convey surprise (Azevedo, 2005). However, even when the element of surprise was not present, an optional final rise has been described for the European varieties, dependent on available segmental material after the tonic syllable (Frota, 2002; Vigário & Frota, 2003). Additionally, Lira and Moraes (2011) described dialectal differences within the Northeast in the final contour, with some showing a final rise, or a complex falling-rising pitch accent.

3.3.1 Neutral wh-questions

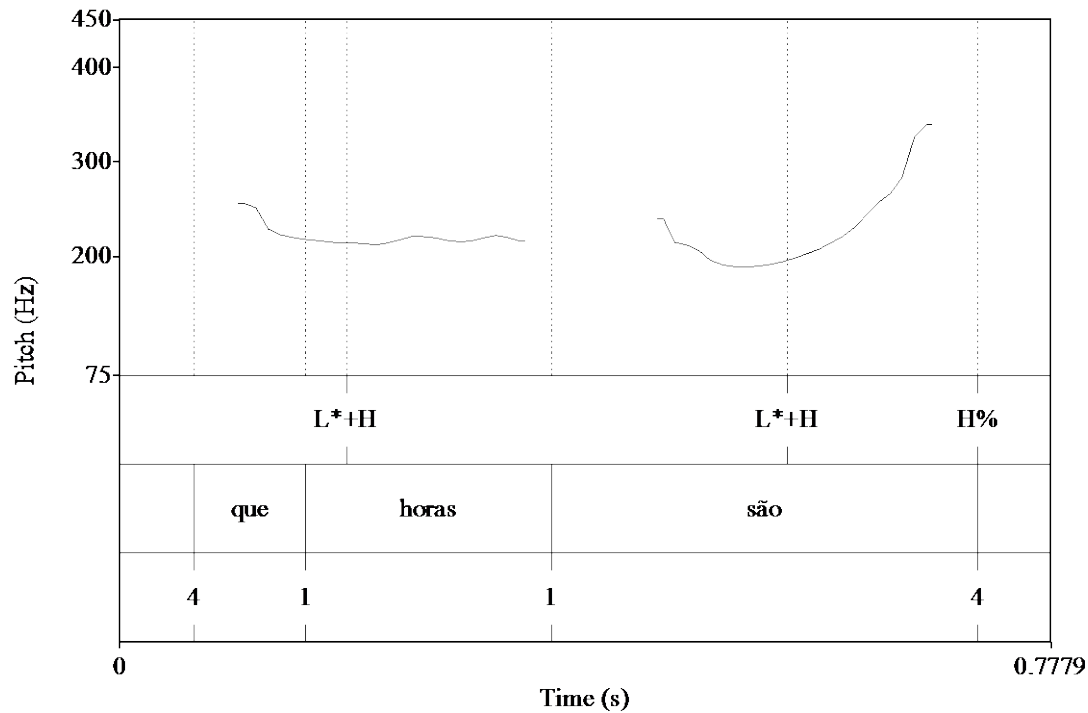
The data analyzed here show a similar alternation to that found with yes-no questions. Wh-questions as well present two major patterns, one of which coincides with the descriptions found in the literature for wh-questions in EP, which is the final falling or low pattern, with the nuclear contour consisting of a H*+L or L* on the tonic syllable, followed by a low boundary tone L%. An example of this pattern can be seen in Figure 11.

Figure 11. F₀ contour and textgrid of the wh-question *Que horas são?* ‘What time is it?’ produced by a female speaker from Solânea, Paraíba, age 31.



However, this falling pattern was less commonly observed in the current data than the final rising pattern, in which the tonic syllable exhibits either a rising L*+H tone or low plateau L*, and a final rise, characterized as H%. Figure 12 shows an example of this pattern.

Figure 12. F_0 contour and textgrid of the wh-question *Que horas são?* ‘What time is it?’ produced by a female speaker from Teresina, Piauí, age 25.



A difficulty presented by the current data is that most wh-questions elicited ended in an oxytone, and it was therefore difficult to determine here whether phrase-final movement was the result of a bitonal pitch accent itself, or a combination of a monotonal pitch accent with a boundary tone. In the pattern showed in Figure 12, however, the fact that the rise is extra high seems to indicate that a trailing high tone from the nuclear pitch accent and the high tone from the boundary have combined.

3.4 Echo questions

Echo questions are designed to confirm that the speaker has heard or has understood correctly; they are essentially reiterations of questions just asked by an interlocutor. Because of this, it is possible to interpret all echo questions as effectively asking the yes-no question “Did you say X?” Therefore, an echo wh-question would be quite likely to bear a similar intonational pattern as an echo yes-no question. In fact, that expectation is borne out in the data examined here, as discussed below.

Although there are no detailed descriptions of the intonation used for echo questions in Portuguese known to the researcher, Cruz-Ferreira (2002) briefly mentions that they tend to be characterized by a high-rise pattern in which a mid-tone rises to a high level. Evidence from Spanish shows a high degree of interdialectal variability but one pattern commonly described was a nuclear pitch accent that includes an upstepped high target, either $L_{+i}H^*$ or simply $!H^*$, followed by a low boundary tone (Prieto & Roseano 2010).

3.4.1 Yes-no echo questions

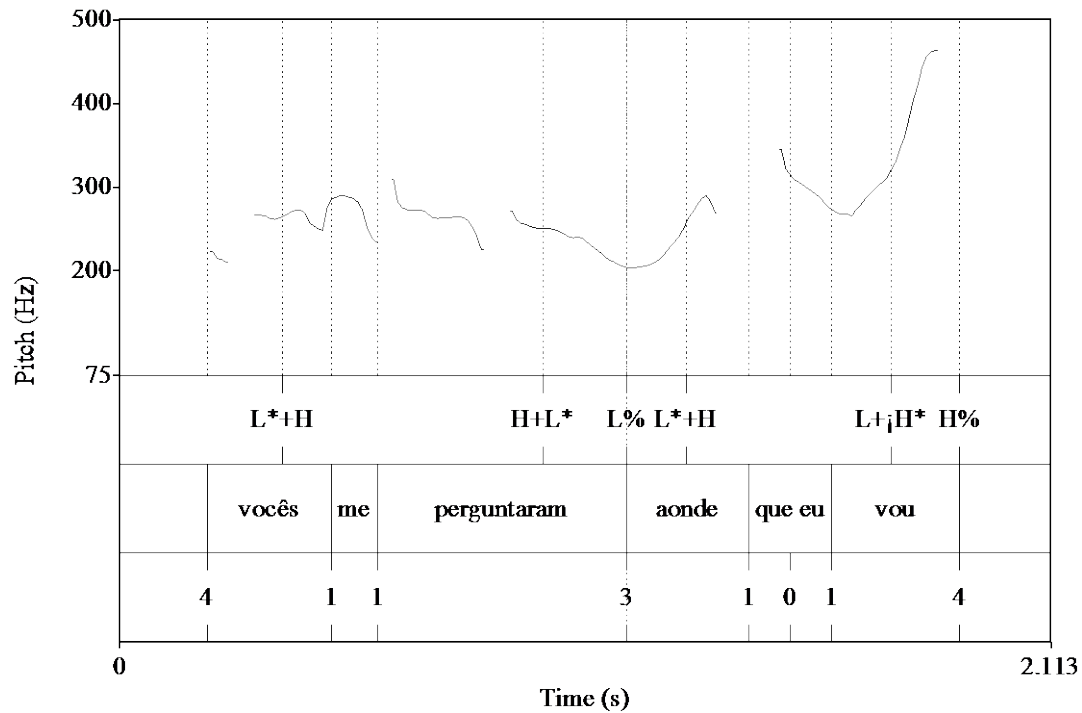
In the current corpus, yes-no echo questions exhibit the same type of alternation found in non-echo neutral YNQs, with some tokens showing a high rising terminal, and some falling to a final low tone. In the rising pattern, the phrase-initial pre-nuclear accent was the rising L^*+H , and the nuclear contour consisted of a pitch accent that was either L^*+H or L^*+iH . Intervening prenuclear accents were typically also L^*+H . In the falling pattern, the same prenuclear patterns

were observed, but there was no upstep in the nuclear pitch accent, and the final boundary tone was analyzed as L%, near the low end of speakers' range.

3.4.2 Wh- echo questions

Wh-echo questions consistently showed a nuclear configuration consisting of a nuclear L^*+H pitch accent followed by a high boundary tone, resulting in a high final rise, as shown in Figure 13. The sharp rise at the end is analyzed as the combination of the high target of the pitch accent with the high boundary tone, resulting in an extra high final rise. Interestingly, even though these can be interpreted as a type of YNQ, as mentioned above, none of the Wh-echo questions showed the variation that the neutral and echo YNQs and neutral WHQs showed. Only one pattern was observed: that which is characterized by a falling tone into the nuclear tonic syllable, followed by a sharp rise.

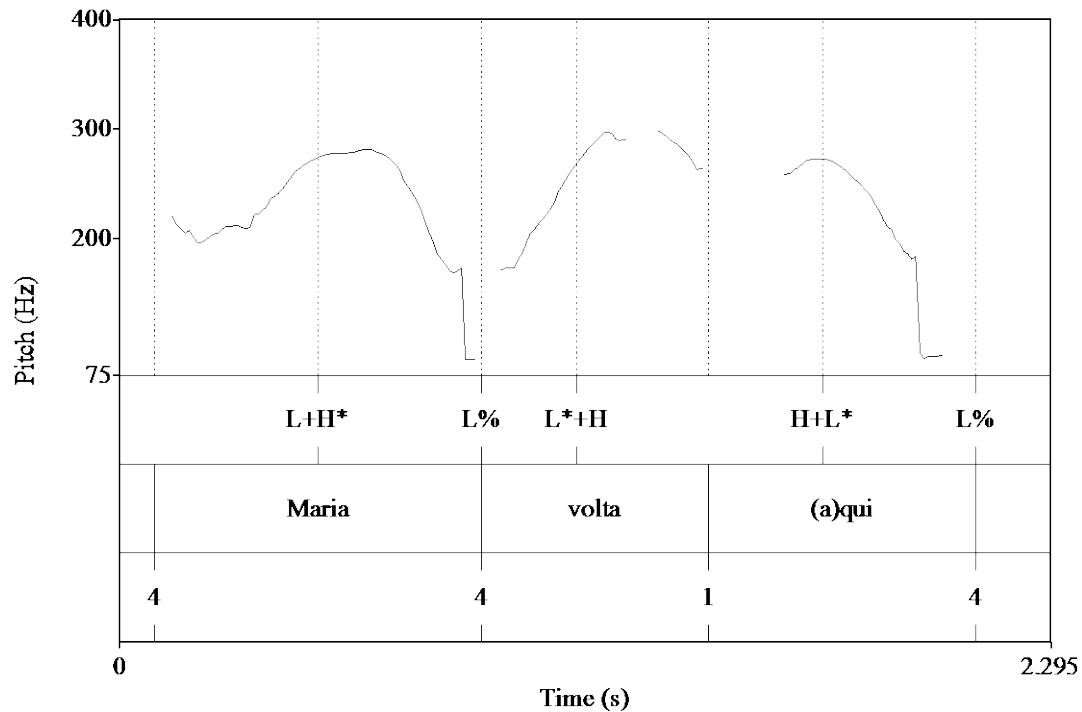
Figure 13. F₀ contour and textgrid of the wh- echo question *Vocês me perguntaram aonde que eu vou?* ‘Did you (plural) ask me where I’m going?’ produced by a female speaker from Sobral, Ceará, age 28.



3.5 Imperatives

On the surface, imperative statements look rather like declaratives simply realized with greater intensity. In the current data, they consistently showed an early rise in the phrase-initial prenuclear syllable, and consistently end with a rise-fall pattern. Upon close analysis, however, it was determined that one major difference between the two types of utterances is that imperatives do not show the downdrift that is characteristic of declarative statements. Instead, as shown in Figure 14, there are very large pitch excursions throughout as opposed to the much smaller movements that declaratives show.

Figure 14. F_0 contour and textgrid of the imperative command statement *Maria, volta aqui!* 'Maria, come here!' produced by a female speaker from Parnaíba, Piauí, age 28.



In summary, NEBP shows several quite different patterns from descriptions of other Portuguese dialects, but there are a few similarities as well. The findings of this section are summarized below in Table 3. As the table shows, the main traits that should be perceived by a speaker of another dialect as distinctive for NEBP are the focus pattern, as well as one of the variant patterns each for YNQs and WHQs. These are highlighted in red text in the table.

Table 3. A cross-dialectal comparison of nuclear configurations found for NEBP with those previously described for Standard European Portuguese, Northern European Portuguese, and other dialects of Southeastern Brazilian Portuguese (Rio de Janeiro and São Paulo).

Phrase type	SEP	NEP	Southeastern BP	NEBP
Neutral (broad-focus) declarative	H+L* L%	L* L%	H+L* L%	H+L* L%
Narrow (contrastive) focus declarative	L*+H	--	L*+H L%	; H+L* L%
Yes-No Question	H+L* LH% H+L* L%	L* H- L% H+L* L%	L+H* L%	L+H* H% L*+H L%
Wh-question	H+L* L% H+L* LH%	L* L% H+L* H%	H+L* L%	H+L* L% L*+H H%
Imperative statement	--	--	H+L* L%	H+L* L%

4.0 Discussion

4.1 NEBP Tones

In considering the data analyzed and described above, a general pattern found in NEBP intonation was an alternation of L and H target tones, following the Obligatory Contour Principle (Odden, 1986). Also, notably, and as previously described as one of the major differences between EP and BP, the present data showed a high density of pitch accents in each utterance, typically one per prosodic word (Frota & Vigário, 2000; Fernandes, 2007; Viana & Frota, 2007) whereas EP typically shows a phrase-initial prenuclear accent, and a nuclear accent, while the stretch in between remains underspecified for pitch. Possibly as a result of these characteristics, it was determined here that NEBP seems to prefer dynamic tones rather than monotonal targets. This would seem to suggest that NEBP's intonational system relies much more on pitch movement than pitch height, which partially coincides with the rather strong assertion that BP pitch accents are dynamic in nature, that there are in fact, no monotonal pitch accents. (Moraes, 2008).

4.2 Main nuclear and prenuclear accents

The chief nuclear accent found in declarative statements, commands, and variants of both YNQs and WHQs is H^*+L . This concurs with existing descriptions of both EP (Cruz-Ferreira, 2002; Frota, 2002; Frota & Vigário, 2000; Viana & Frota, 2007; Vigário & Frota, 2003) and BP (Fernandes, 2007; Frota & Vigário, 2000; Lucente, 2008; Madureira 1994; Moraes, 2008; Viana & Frota, 2007).

The most common prenuclear pattern found in the corpus was a rising contour, either L^*+H or $L+H^*$. These were particularly common in phrase-initial prenuclear position in this corpus, and were also used in phrase-medial prenuclear syllables. As mentioned above, Moraes (2008) has suggested that since these two patterns are found in complementary distribution, they be united under one label phonologically.

The current version of Sp_ToBI (Estebas-Vilaplana & Prieto, 2008) makes a distinction between the dynamic tone in which the peak is aligned with the post-tonic syllable, L^*+H and the dynamic tone with a displaced peak aligning after the post-tonic $L^*+>H$. This distinction encodes a difference in perception of the accented syllable: it is perceived as high for L^*+H , but low for $L^*+>H$. This distinction did not seem to be relevant in the current data, and therefore, displaced peaks were not identified any differently here.

Upstep tended to be used in NEBP in the nuclear contours of echo questions, or questions conveying an element of surprise, as well as to convey contrastive focus in declaratives. Use of upstep in echo questions has been attested in the Castilian, Cantabrian, and Puerto Rican varieties of Spanish (Prieto & Roseano, 2010), and also in southeastern varieties of BP.

Boundary tones and phrase accents

Regarding boundary tones, BP has typically used the monotonal boundaries L% and H%. An M% boundary tone has been described for some dialects of Spanish, particularly appearing in calls and uncertainty statements (Prieto & Roseano, 2010). In this corpus, a similar boundary tone was found in the sustained pitch variation of enumeration statements, classified as ¡H\% , following the description for EP as a downstepped high target boundary tone (Viana & Frota, 2007).

Phrase accents, needed in a transcription system to account for tonal movement on non-prominent syllables between the nuclear pitch accent and the boundary tone. In many descriptions of Portuguese, they have been discarded, as there does not seem to be evidence for phrase accents that differ from boundary tones, i.e. H- L%, and therefore, transcribing them was redundant (Moraes, 2008). In this study, there was no evidence found supporting their existence, however it must be noted that much of the data collected for this corpus involved fewer than two post-nuclear syllables, and therefore it was not possible to perform this analysis. More data controlled for number of post-nuclear syllables would be necessary to ensure that the possibility of existing phrase accents has not been overlooked.

4.3 Distinct notational systems

It is important to note that there are at least two distinct notational systems used for analyses of Portuguese: P_ToBI for EP (Viana & Frota, 2007), and ToBiPI (Lucente, 2008) for BP. Given that there were quite a few more studies published using the P_ToBI system, and therefore, more

data available for comparison, the labeling conventions of P_ToBI were used in this study. The transcription conventions are essentially the same, with most labels having a one to one correspondence between systems, with two exceptions. ToBiPI makes use of the tritonal label HLH to designate a falling-rising tone on a word in which there are consecutive rises within the prenuclear and nuclear material. A tritonal analysis of LHL is also used to represent the high plus downstepped high pattern (H+!H) seen in statements. Tritonal contours have been described for Argentinian Spanish as well, particularly in utterances expressing contrastive focus (Prieto & Roseano, 2010). The tritonal analysis suggests that different parts of the curve are responsible for the phonological contrasts noted, and therefore will need to be investigated further in a follow-up study.

4.4 Summary of intonational features of NEBP

Above, I have made a first attempt at characterizing the intonation of NEBP. Following is a summary of the main traits of this dialect and general conclusions about what makes NEBP distinctive.

Post-lexical prominence in NEBP is realized, as in SEBP, by means of an expanded local pitch range (along with duration and intensity (Moraes 1998)) around the stressed syllable of the focused word, with very high frequency usually in the syllable immediately preceding the stressed syllable. A narrow focus statement differs from a broad focus statement in that a broad focus statement is characterized by a series of rises (each lower than the last) until a final fall, whereas the narrow focus statement is characterized primarily by contour on the focused word. This is similar to SEBP, but the rise happens later in NEBP, aligning with the post-tonic syllable

when the focused word is in phrase medial position. Expanded pitch immediately preceding or following the stressed syllable draws attention to the focused constituent.

Commands differ from a broad focus statements in that they employ much wider local pitch excursions resulting in a globally wider pitch range, and a more dramatic final fall, which helps to contribute to the idea of finality or will.

Both absolute and pronominal questions in NEBP showed variation, and as of yet, it is unclear what is the pragmatic meaning of this variation. Both types of questions started relatively high and fell throughout until the end, at which point one pattern was a final rise-fall, and the other a rise to high.

Ladd (1996, 2008) has discussed four ways in which languages differ intonationally, which can also be applied here to ways in which dialects of the same language differ: systemically, i.e. differences in the inventory of phonologically distinct tune types; realizationally, i.e. differences in the phonetic realization of the same tune; semantically, i.e. differences in the meaning or use of the same tune; and phonotactically, i.e. differences in the tune-text association and in the permitted structure of tunes.

Systemically, NEBP employs different nuclear accents from SEBP for narrow focus declarative, one variant each of YNQ and WHQ. A realizational difference is in the alignment of tones with stressed syllables, particularly as mentioned above for the narrow focus contour: the alignment of the extra high tone varies as a function of the placement of the focused element in the sentence. Only one semantic difference is found, in which the same pattern signifies contrastive focus in SEBP, but YNQ in NEBP. In terms of phonotactics, it appears that the prosodic domain, and phrasing characteristics are similar to SEBP, but further investigation will uncover whether or not there are any particularities in phrasing that distinguish NEBP. Overall, it

seems clear that NEBP does display some patterns that distinguish it from other dialects, but more work is needed to fully understand the differences.

4.5 Limitations of this study and areas for further research

As Atterer and Ladd have noted (2004), while notational distinctions are capable of capturing some important phonological distinctions, instrumental measurements of phonetic details are also necessary to approximate a more complete understanding of the systems employed. Studies that measure the phonetic details of will help to better understand the details around pitch height and alignment, and to tease apart interactions between F_0 values and other phonetic factors such as duration and intensity.

Additionally, it will be critical to perform perception studies on this dialect in to better understand what is truly phonologically important (i.e. contrastive), and what constitutes allophonic variation. Perception studies that manipulate phonetic elements of contours such as F_0 height, F_0 slope, and syllable alignment of both F_0 peaks and valleys will help approach a more complete understanding of the intonational system of NEBP.

An acknowledged limitation of this analysis is that only one researcher performed the tone transcriptions. Although efforts were made to ensure intra-transcriber reliability, and comparisons were made with previously existing transcription data for both EP and BP, in order to ensure that results are reliable and repeatable, at least one additional transcriber would be desirable. Moreover, although the benefits of using semi-spontaneous speech of the type elicited here are numerous, and allow for an analysis that is based on natural data, there are some

important factors that can only be studied by eliciting specific phrases in which the segmental information has been controlled.

5.0 Conclusion

The description and analysis of the intonational system of NEBP presented here is an important first step in comprehensively describing the patterns found in the dialect, and contributes to the literature on intonation and dialectology in BP.

The major contribution of this study to intonational phonological theory is the successful application of AM theory and the ToBI transcription system to data from a dialect not previously covered, thus providing further support for the validity of the theory in its extension to new data. This analysis adds to cross-linguistic knowledge about the various ways phrase modality and pragmatics can manifest in intonation.

An additional significant contribution of this research is the discovery of two distinct contours for both YNQs and WHQs in an intra-speaker context. To my knowledge, this phenomenon has not been previously noted for any dialect of Portuguese. These opposing contours had previously been described as dialectal differences between southern and northeastern BP regional varieties (Moraes 1998) or between varieties within the northeast (Lira and Moraes 2011). The fact that intra-speaker variation was found suggests that speakers may be using these patterns to convey some pragmatic or social distinction, and this begs further investigation.

This initial study is intended to be the beginning of a larger research program in which the intonation of the area is studied in greater depth with attention to social meanings, style, and

attitudes. Additionally, future research will compare the intonation of this dialect with other dialects of Brazil, as well as to examine the intonation used by speakers of specific regions within the Northeast.

It is hoped that the present findings will add to the body of work on dialectal variation in intonation, and will contribute to our general understanding of intonational patterning across languages.

APPENDIX A

QUESTIONNAIRE USED TO ELICIT UTTERANCES (BRAZILIAN PORTUGUESE)

1. DECLARATIVAS

1.1 Neutra

Orações de uma unidade tonal

1. Olhe o desenho e diga o que a menina faz.



2. Olhe o desenho e diga o que a mulher faz.



3. Ana está contando para você que ontem ela bebeu uma limonada. Neste momento, chega outro amigo e pergunta o que Ana disse. Diga a ele o que foi que Ana disse.

Orações de mais de uma unidade tonal

4. Olhe o desenho e diga o que Maria faz.



5. Olhe o desenho e diga o que você vê.



6. Olhe o desenho e diga o que a senhora morena faz.



Enumerações

7. Diga os dias da semana.

8. Diga o que você comeu no almoço.

Elementos periféricos (deslocações, vocativos, elementos parentéticos, aposições)

9. Imagine que você acaba de conhecer alguém do Maranhão e coincidentemente você já morou lá muitos anos. Como você diria isto para a pessoa?

10. Você está em casa com seu marido, que está assistindo a televisão. Diga para ele que você vai sair por um momento para lanche.

11. Você está doente e esta manhã teve que ir para o médico. Diga que você foi apesar de estar chovendo muito.

12. Você conhece duas meninas que se chamam Marina, uma loura e uma morena. Diga que hoje você viu a morena.

1.2 Não neutra

Focalização contrastiva

13. Você vai ao mercado para comprar frutas e a vendedora é um pouco surda. Ela não ouviu bem e depois de dizer que você queria um quilo de limões, ela pergunta para você se você quer tangerinas. Diga que não, que você quer limões.

Ênfase

14. Você entra numa padaria e percebe um cheiro de pão muito bom. Diga para o padeiro.

Declarativa categórica

15. Você e uma amiga estão falando de uns amigos que vão viajar. Você tem certeza que eles irão pro Rio de Janeiro, mas sua amiga disse que tem certeza que eles irão para São Paulo. Diga para ela, com firmeza, que não, que irão para o Rio.

Declarativa dubitativa

16. Você ficou encarregado de comprar um presente para alguém que você não conhece bem e você se preocupa em fazer uma boa compra. Diga para a pessoa que pediu para você fazer isto que talvez a pessoa não goste do presente que você comprou.

Declarativa de obviedade

17. Você está com uma amiga e conta que Maria, uma amiga em comum, está grávida. Ela pergunta pra você quem é o pai e você acha muito estranho que ela não saiba porque todo mundo sabe que é do Guilherme, namorado dela de toda a vida.

Declarativa exclamativa

18. Você foi convidada para tomar uma sopa e foi a melhor sopa que você tomou na vida! O que você diz?

19. Você está com muito frio, como nunca sentiu antes. O que você diz?

2. INTERROGATIVAS ABSOLUTAS

2.1 Neutra

Orações de uma unidade

20. Você entra numa loja e pergunta ao empregado se tem doce de goiaba.

21. Você está na rua e pergunta as horas.

22. Peça licença para entrar na sala onde o médico espera você.

Orações de mais de uma unidade

23. Você liga por telefone para a casa de uma amiga que se chama Maria, mas ela não está. Mais tarde você liga de novo e pergunta se a Maria está em casa. Como vc. pergunta se ela já chegou?

24. Você marcou um jantar para uma data e decidiu mudar para que todos os convidados pudessem ir. Pergunte se eles vão poder se o jantar for no primeiro dia de maio.

A disjunção

25. Para a sobremesa você tem abacaxi e sorvete. Pergunte aos convidados se querem abacaxi ou sorvete.

26. Seu filho quer visitar o tio dele e você quer ir com ele. Pergunte se vai hoje ou amanhã.

Enumerações

27. Você vai comprar limões para sua mãe mas não sabe quantos ela quer. Pergunte se são três, quatro, cinco, ou seis.

28. Você está procurando a Maria mas não consegue encontrar. Você vê alguém que também conhece ela, e depois de falar um pouco sobre a Maria você pergunta se ele viu ela.

29. Você está falando com alguém na sala da sua casa e escuta que uma pessoa chegou. Pergunte se é a Maria quem está entrando.

30. O eletricista ficou de vir as dez, mas você teve que dar uma saída e deixou seu marido em casa esperando. Quando você voltou, o eletricista não tinha chegado. Surpresa, pergunte se ainda não chegou.

31. Você está jantando num apartamento de seu amigo. O ar condicionado é muito forte e faz muito frio. O seu amigo tira a camisa. Surpresa, pergunte se ele está com calor.

Perguntas confirmatórias

32. João já falou que ia almoçar na sua casa mas você quer confirmar. O que você diz para ele?

33. Antes de você sair para trabalhar, seu irmão falou que não se sentia bem. Ao voltar, você encontra ele na cama com febre. Você sabe que ele está com febre, mas pergunta assim mesmo

(se ele está com febre), sabendo o que vai ser a resposta. (Próximo a negação, *hein* ou *verdade* na posição final)

34. Você tem muita vontade de que alguém venha para um jantar que você organizou. Você quer confirmar se esta pessoa vai. (Próximo a afirmação, *hein* ou *verdade* na posição inicial)

35. Você sabe que está fazendo muito frio. Alguém entra bem agasalhado e você pergunta para ele si está com frio (Caráter hipotético, margem para responder sim ou não)

Perguntas imperativas

36. Seus netos fazem muito barulho e não deixam vc . ouvir as notícias. (na televisão ou no rádio). Peça para eles que se calarem (Rogação-ordem)

37. Eles continuam, e você pede mais uma vez. Desta vez, você está nervosa/com raiva. (Ordem)

38. Você pergunta para um amigo se ele quer ir tomar um sorvete com você (Convite)

39. Pergunte aos seus sobrinhos se eles querem chocolate (Convite).

40. Você organiza uma festa na sua casa e tem muita vontade que um amigo seu vá. Pergunta para ele se ele quer ir. (Intenção exortativa: gostaria muito que viesse)

41. Você precisa subir três andares porque deixou a bolsa no seu apartamento. Você está com seu filho de dez anos, e para ganhar tempo, deixa ele lá em baixo. Diga que não sai de lá.

(Rogação-ordem, com partícula hein)

42. Você precisa de tranquilidade, mas sua família está fazendo muito barulho e animação. Pergunte se alguma vez terá tranquilidade neste lar.

3. INTERROGATIVAS PARCIAIS

3.1. Neutra

Orações de uma unidade

43. Pergunte as horas.

44. Pergunte as horas a uma pessoa mais velha.

45. Você foi a um lugar turístico a pé (por exemplo o Cristo Redentor). Quando chegou lá em cima, você encontra um amigo e pergunta para ele quando ele chegou.

Orações de mais de uma unidade

46. Você vê que Maria está indo embora. Pergunte por onde ela vai e quando vai voltar.

(Coordenação)

47. A vizinha conta para você que um senhor veio revisar a instalação do gás e não deixou ele entrar porque ela não tinha suficiente dinheiro em casa para pagar ele. Pergunte para ela o que ela vai dizer se ele voltar. (Subordinação)

Elementos periféricos

48. Você encontra um pacote (encomenda) na sua casa e pergunta ao seu filho Mario quem trouxe isto.

3.2 Não neutra

Focalização contrastiva

Ênfase e perguntas exclamativas

49. Seu primo conta para você que o avião que vinha de Belo Horizonte chegou muito atrasado.

Pergunte a ele, surpresa, a que hora o avião chegou.

Perguntas dubitativas

50. As duas da manhã alguém bate na porta. Você está dormindo e acorda. Pergunte para você mesmo quem será a está hora.

Perguntas imperativas

51. Você pede a seu filho para arrumar o quarto dele. Você não tem certeza que ele vai arrumar, porque não é a primeira vez que ele não faz algo que você pede. Pergunte, meio zangada, quando ele vai arrumar o quarto. (Ordem)

52. Você tem vontade de que alguns amigos venham jantar na sua casa. Meio “suplicando” (porque já disseram que não podem vir) pergunte porque eles não vêm.

53. Alguém puxa você pela camisa algumas vezes e quando você se vira não vê ninguém. Finalmente, na terceira vez, você vê que é um conhecido muito chato e falador que sempre que encontra, não te deixa em paz. Pergunte o que ele quer. (Queixa leve ou protesta)

Perguntas retóricas

54. Você já falou para as pessoas que trabalham com você que fizessem uma coisa, mas quando você chega, descobre que não fizeram porque estavam esperando por você. Pergunte para eles o que fariam sem você.

INTERROGATIVAS REITERATIVAS

4.1 Neutra

55. Você convidou um amigo para ir ao cinema e ele falou que não pode ir. Você não entendeu bem. Peça para ele clarificar o que disse.

56. Disseram as horas para você, mas você não ouviu bem. Você acha que disseram que são nove horas. Volte a perguntar.

57. Perguntaram para você aonde você vai, mas você não sabe se entendeu bem a pergunta. Averigue se foi isso o que haviam perguntado.

Orações de mais de uma unidade tonal

58. Perguntaram pra você aonde você vai e quando é que vai voltar. Mas você não sabe se entendeu bem a pergunta. Pergunte se foi isso o que disseram.

A disjunção

59. Perguntaram quando você chegou na festa mas você não sabe se perguntaram isto ou se perguntaram por onde entrou. Averigua se perguntaram uma coisa ou a outra.

Elementos periféricos

60. Comentam que uma amiga sua, Marina, quer sair para dançar e você sabe que ela não gosta de dançar. Você não acredita e pergunta se é realmente a Marina que quer ir.

4.2 Não Neutra

Focalização e ênfase

61. Falaram para você que um amigo seu, Mario, se candidatou a prefeito. Você não acredita e volta a perguntar.

Perguntas reiterativas exclamativas

62. Sua vizinha conta pra você que foi a um restaurante turístico e pediu carne de jacaré. Você não pode acreditar e pergunta se ela realmente pediu este prato. (muito surpresa)

5. ORAÇÕES IMPERATIVAS

5.1 Ordens

63. Imagine que você trabalha na recepção de um hotel e um casal chega e quer um quarto. Peça para eles preencherem um formulário.

64. Você vê que eles estão um pouco distraídos e não completam o formulário. Fale mais uma vez que preencham (com mais insistência).

65. Você está no parque com sua neta, Maria, e ela foge de você. Diga que venha, que não se afaste tanto de você.

66. Vocês saíram do parque e ela volta a escapar. Diga que venha, (com mais insistência).

67. Agora vocês estão na rua onde passam os carros e ela volta a escapar. Você está muito nervosa e diz pra ela, zangada, que volte e que fique perto de você (com muito mais insistência).

68. Você está passeando com o cachorro, Bobi, e ele escapa de você. Chame ele.

5.2 Rogações

69. Você quer ir jantar com um amigo. Ele diz pra você que tem que trabalhar, mas você sabe que o trabalho pode esperar. Como você faria para convencer ele?

70. Parece que ele quer ir, mas diz para você que não. Insista para ver se você pode convencer ele.

6. VOCATIVOS

71. Você entra na casa de uma amiga, Marina, mas ao entrar você não vê ela. Chame por ela.

APPENDIX B

ENGLISH TRANSLATION OF QUESTIONNAIRE

1. STATEMENTS

1.1 Neutral

Sentences with one tonal unit

1. Look at the drawing and say what the girl is doing.



2. Look at the drawing and say what the woman is doing.



3. Ana is telling you that yesterday she drank a lemonade. Just then, another friend arrives and asks what Ana says.

Sentences with more than one tonal unit

4. Look at the photo and say what Maria is doing.



5. Look at the drawing and say what you see.



6. Look at the drawing and say what the woman is doing.



Enumerations

7. Say the days of the week.

8. Say what you ate for lunch.

Peripheral elements (dislocations, vocatives, parenthetical elements, appositions)

9. Imagine that you've just met someone from Maranhão y coincidentally, you used to live there.

How do you say this to the person?

10. You're at home with your husband, who is watching television. Tell him that you're going out for a minute for a snack.

11. You are sick and this morning you had to go to the doctor. Say that you went even though it was raining.

12. You know two girls named Marina, one blonde/light-skinned, and one dark-skinned. Say that today you saw the dark-skinned one.

1.2 Not neutral - marked

Contrastive focus

13. You go to the market to buy fruit, but the seller is a little bit deaf. She didn't hear you well, and after saying that you wanted a kilo of lemons, she asks if you want tangerines. Tell her no, that you want lemons.

Emphasis

14. You enter a bakery and notice the really good smell of bread. Tell the baker.

Contradictory statement

15. You and a friend are talking about some friends who are going on a trip. You are certain that they're going to Rio de Janeiro, but your friend says she's certain that they're going to São Paulo. Tell her firmly that, no, they're going to Rio.

Statement of uncertainty

16. You are in charge of buying a present for someone you don't know very well and you're worried about buying an appropriate gift. Tell the person who asked you to do this that maybe the person won't like the present you buy.

Statement of the obvious

17. You are with a friend and tell her that Maria, a friend in common, is pregnant. She asks you who the father is, and you find it strange that she doesn't know, because everyone knows that it's Guilherme, Maria's boyfriend of many years.

Exclamative statement

18. You were invited to try some soup and it turned out to be the best soup you'd ever tried!
What do you say?

19. You feel very cold, colder than ever before. What do you say?

2. YES-NO QUESTIONS

2.1 Neutral

Questions with one tonal unit

20. You enter a store and ask the employee if they have guava jam.

21. You are on the street and ask for the time.

22. Ask for permission to enter the room where the doctor is waiting.

Questions with more than one tonal unit

23. You phone the house of a friend named Marina, but she's not there. Later, you phone again and ask if Maria is there. How do you ask if she has arrived home yet?

24. You have scheduled a dinner for a certain date, and you decide to change the date so that all the guests will be able to attend. Ask if they will be able to come if the dinner is the first of May.

Disjunctive questions

25. For dessert, you have pineapple or ice cream. Ask your guests if they would like pineapple or ice cream.

26. Your son wants to visit his uncle and you want to go with him. Ask if he is going today or tomorrow.

Enumerations

27. You are going to buy lemons for your mother, but you don't know how many she wants. Ask if it's three, four, five, or six.

28. You are looking for Maria, but you can't find her. You see a friend that also knows her, and after talking to him about her for a minute, you ask if he has seen her.

29. You are talking with someone in the living room of your house when you hear someone arrive. Ask if it's Maria who is arriving.

30. The electrician was supposed to come at ten, but you had to go out, and left your husband at home to wait. When you get back, it seems that the electrician still has not come. Surprised, ask if he still hasn't arrived.

31. You are eating dinner at a friend's apartment. The air conditioning is really strong and it's very cold. Your friend takes off his t-shirt. Surprised, ask if he's hot.

Confirmation seeking questions

32. João already told you that he will eat lunch at your house but you want to confirm. What do you say to him?

33. Before leaving for work, your brother said that he didn't feel well. When you return, you find him in bed with a fever. You know that he has a fever, but you ask anyway (if he has a fever), knowing what the answer will be.

34. You really want someone to come to a dinner that you've organized. You want to confirm that this person is coming. How do you ask?

35. You know that it's really cold outside. Someone enters, all bundled up, and you ask, sarcastically, if he is cold.

Imperative yes-no questions

36. Your grandchildren are making a a lot of noise and aren't letting you listen to the news (on TV or the radio). Ask them to be quiet.

37. They continue and you ask again, annoyed.

38. You ask a friend if he wants to to go get ice cream with you.

39. Ask your nephews if they want chocolate.

40. You've organized a party at your house and you really want a friend of yours to come. Ask him if he wants to come.

41. You need to go up 3 floors, because you left your bag upstairs. You're with a your ten year old son, and to save time, you leave him downstairs. Tell him not to move.

42. You need peace and quiet, but your family is making a lot of noise. Ask if there will ever be peace in this home.

3. WH- QUESTIONS

3.1. Neutral

Sentences with one tonal unit

43. Ask for the time.

44. Ask for the time from an older gentleman.

45. You went to a tourist attraction (for example, Cristo Redentor). When you get to the top, you meet a friend and ask when he got there.

Sentences with more than one tonal unit

46. You see that Maria is leaving. Ask where she is going and when she will return.

47. Your neighbor tells you that a man came to check the gas meter and she didn't let him in because she didn't have enough money at the house to pay him. Ask her what she will say if he comes back?

Peripheral elements

48. You find a package in your house and ask your husband Mario who brought it.

3.2 Not neutral

Contrastive focus

Emphasis and exclamative questions

49. Your cousin tells you that the plane from Belo Horizonte arrived very late. Ask him, surprised, what time the plane arrived.

Questions of uncertainty

50. At two in the morning, someone knocks on your door. You are sleeping and you wake up. Ask yourself who it could be at this hour.

Imperative questions

51. You ask your son to clean up his room. You aren't sure he's going to do it, because this isn't the first time he hasn't done something you've asked. Ask, kind of annoyed, when he will clean his room.

52. You want some friends to come to a dinner at your house. Kind of begging (because they already said they can't come), ask why they're not coming.

53. Someone pulls you by the t-shirt from behind a couple of times, but when you turn around you don't see anyone. Finally, the third time, you see that it's a really annoying talkative acquaintance that every time you run into, never lets you leave.

Rhetorical questions

54. You have told some people that work with you to do something, but when you arrive, you find out that they haven't done it because they were waiting for you. Ask what they would do without you?

REITERATIVE QUESTIONS

4.1 Neutral

Reiterative yes-no questions

55. You invited a friend to go to the movies and he said he can't go. You didn't understand well. Ask him to clarify what he said.

56. You were told the time, but you didn't hear well. You think they said it's nine o'clock. Ask again.

Reiterative wh-question

57. You are asked where you are going, but you're not sure you understood the question. Verify that it was this that was asked.

Questions with more than one tonal unit

58. You are asked where you are going and when you will return. But you're not sure that you understood the question. Ask if it was this that they asked.

Disjunction

59. You were asked where you are coming from, but you aren't sure if you were asked this, or if it was where you entered. Verify if they asked one thing or the other.

Peripheral elements

60. Someone says that a friend of yours, Marina, wants to go out dancing and you know that she doesn't like to dance. You don't believe it and ask if it's really Marina that wants to go.

4.2 Not Neutral

Focalization and emphasis

61. It is said to you that a friend of yours, Mario, is running for mayor. You don't believe it and ask again.

Reiterative exclamation question

62. Your neighbor tells you that she went to a tourist restaurant and ate alligator meat. You can't believe her and you ask if it was her that ordered that.

5. IMPERATIVES

5.1 Orders

63. Imagine that you work in reception at the hotel and a couple arrives and wants a room. Ask them to fill out a form.

64. You see that they are a little distracted and they didn't complete the form. Tell them again to fill it out (more insistent).

65. You are at the park with your granddaughter, Maria, and she runs away from you. Tell her to come, not to get so far away from you.

66. You leave the park and she breaks free again. Tell her to come (with more insistence).

67. Now you are on the street where the cars are passing and she breaks free again. You are very mad and tell her, angrily, to come back, and to stay close to you. (with more insistence).

68. You are walking the dog, Bobi, and he runs away. Call him.

5.2 Requests

69. You want to go to dinner with a friend. He tells you that he has to work, but you know that work can wait. What do you say to convince him?

70. It seems that he wants to go, but he tells you no. Insist to see if you can convince him.

6. VOCATIVES

71. You enter the house of a friend, Marina, but you don't see her. Call her.

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